Title (en)

Random trans SBR with low vinyl microstructure

Title (de)

Statistisches SBR mit hohem Transgehalt und niedrigem Vinylgehalt

Title (fr)

SBR statistique à haute teneur en trans et à basse teneur en vinyl

Publication

EP 0877034 A1 19981111 (EN)

Application

EP 98107597 A 19980427

Priority

US 4558697 P 19970505

Abstract (en)

The process and catalyst system of this invention can be utilized to synthesize a highly random styrene-butadiene rubber having a high trans content by solution polymerization. The styrene-butadiene rubber made by the process of this invention can be utilized in tire tread rubbers that exhibit improved wear characteristics. This invention more specifically reveals a catalyst system for use in tiothermal polymerizations which consists essentially of (a) an organolithium compound, (b) a barium alkoxide and (c) a lithium alkoxide. The subject invention further discloses a process for synthesizing a random styrene-butadiene rubber having a low vinyl content by a process which comprises copolymerizing styrene and 1,3-butadiene under isothermal conditions in an organic solvent in the presence of a catalyst system which consists essentially of (a) an organolithium compound, (b) a barium alkoxide and (c) a lithium alkoxide.

IPC 1-7

C08F 36/04; C08F 4/54; C08F 236/10

IPC 8 full level

B60C 1/00 (2006.01); **C08F 4/54** (2006.01); **C08F 4/56** (2006.01); **C08F 236/10** (2006.01)

CPC (source: EP KR US)

C08F 4/48 (2013.01 - KR); **C08F 4/565** (2013.01 - EP US); **C08F 236/10** (2013.01 - EP US); Y02T 10/86 (2013.01 - EP US)

Citation (search report)

- [DA] US 5100965 A 19920331 - HSU WEN-LIANG [US], et al
- [A] US 3903019 A 19750902 - HARGIS IVAN GLEN, et al

Cited by

EP1431334A3; EP3421511A4; ITMI20102199A1; EP0990670A1; GB2342096B; US7019084B2; US6359088B1; US7087549B2; WO2004024800A1; WO2012069335A1

Designated contracting state (EPC)

DE ES FR GB IT NL

DOCDB simple family (publication)

EP 0877034 A1 19981111; BR 9801503 A 19991221; JP H10306114 A 19981117; KR 100549888 B1 20060421; KR 19980086749 A 19981205; US 6103842 A 20000815

DOCDB simple family (application)

EP 98107597 A 19980427; BR 9801503 A 19980428; JP 12327298 A 19980506; KR 19980015948 A 19980504; US 7249298 A 19980504